

HOYA NEW

Hoyas in the Wild



This is a slide from March 1986 Near village of Ghara above Tatopangi Central Nepal 5800' elevation. I do not know who took it . Tree overhanging Kali Ghandaki River gorge. Photographer unknown

Oh There it is !

A pdf publication devoted to the Genus
Hoya ISSN 2329-7336
Volume 7 Issue 2

July 2017

Editor: Dale Kloppenburg

Contents

When a species is collected from the wild, I feel it is wise to identify it, propagate it and name it. In this way it will eventually get it into commercial channels, be distributed to all those interested in this genus and thus be preserved. If in the future the species is lost through natural causes or forest destruction it will still be here on earth in your collection.

1. **Hoya blashernaezii subsp. aurantiaca** Kloppenburg & Mendoza
2. **Hoya blashernaezii subsp. truncata** Kloppenburg & Mendoza
3. **Hoya cumingiana subsp. catanauanensis** Kloppenburg, Mendoza
4. **Hoya capotoanensis subsp. quezonensis** Kloppenburg & Mendoza
5. **mindorensis subsp. lagyoensis** Kloppenburg & Mendoza

Hoya blashernaezii subsp. aurantiaca Kloppenburg & Mendoza

ISSN 2329-7336

Hoya blashernaezii subsp. aurantiaca Kloppenburg & Mendoza subsp. nova, holotypus #255870 (PNH) hic designatus. Similis sp. sed corollae discolor, corolla diamanteo complanatus 0.84 cm contrastre 1.60 cm; coronae lobus brevior 0.30 cm contrastre 0.32 cm et pollinium brevior 0.38 mm contrastre 0.44 mm, differt.

The new subspecies is similar to the species but different corolla is of a different color and the corolla diameter flattened is smaller 0.90 cm versus 1.60 cm and the lobes of the corona are shorter 0.30 cm versus 0.32 cm also the pollinia are shorter 0.38 mm versus 0.44 mm, among other differences. Named for the flower color.



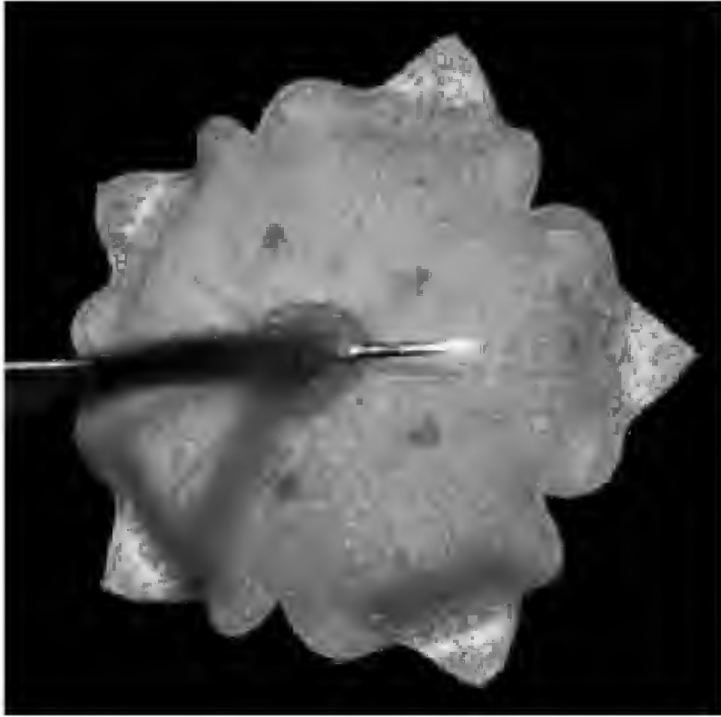
Pedicel: with calyx enlarged ca. 20x. They are curved, terete, glabrous-granulate, 1.70 cm long and 0.07 cm in diameter

Calyx: base bulbous with a granulate surface, Sepals are triangular, 0.17 cm long and 0.10 cm at the widest with an 0.04 cm basal overlap. Surface outside granulate, inside slick glabrous. Ligules are present at the sinuses.

Ovaries: dome shaped, glabrous, 0.10 cm long and base pair 0.05 cm wide.

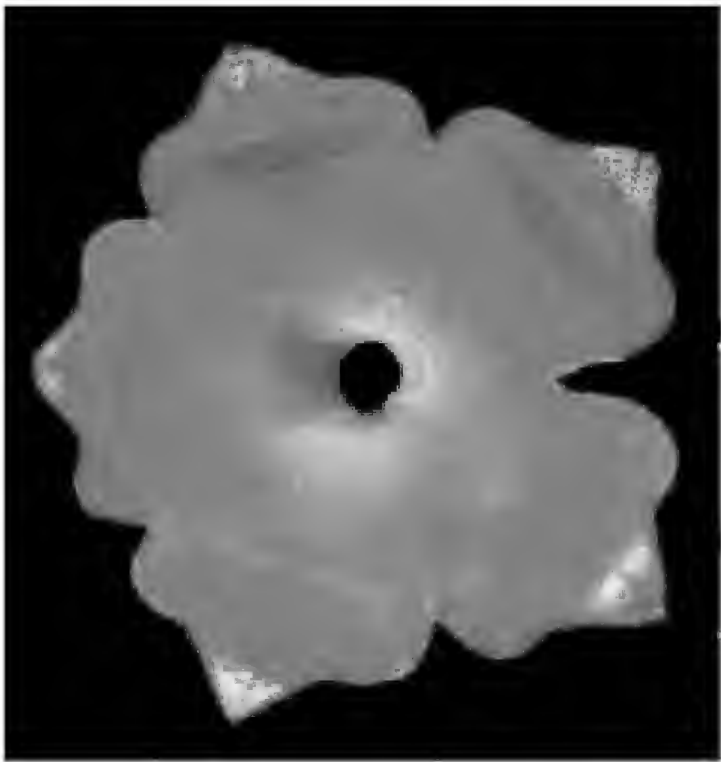


Photo of calyx dorsal enlarged ca. 20x.

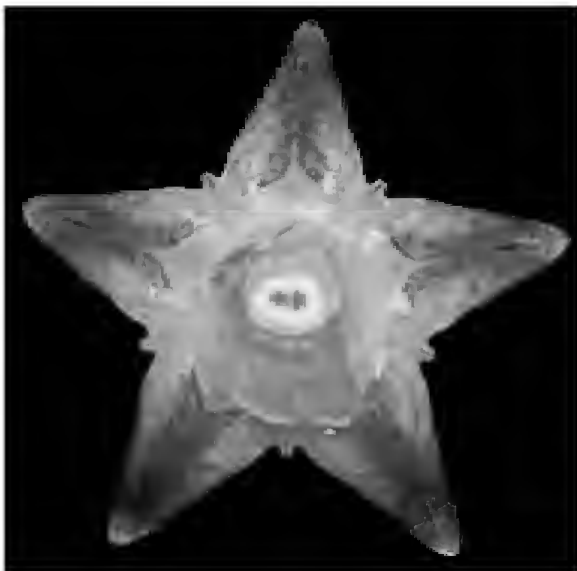


Corolla: ventral surface enlarged ca. 12x.
The surface is convex surface is glabrous.

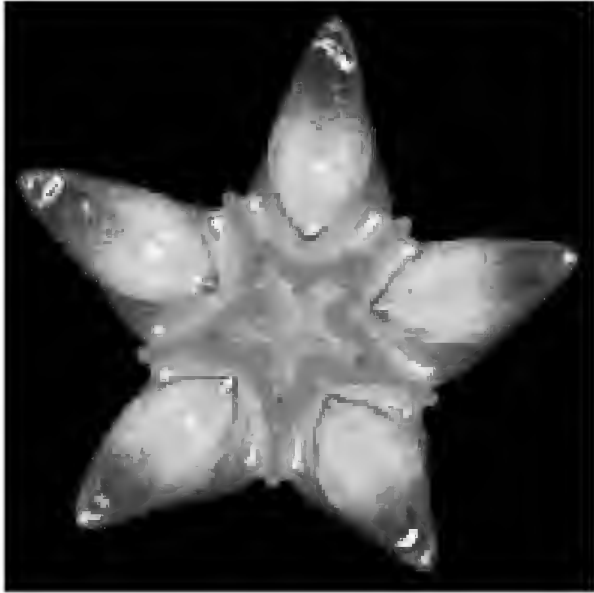
Sinus – sinus	0.30 cm
Sinus – center	0.20 cm
Sinus – apex	0.33 cm
Apex – center	0.42 cm
Widest	0.31 cm



Corolla: dorsal surface enlarged as above.
The surface is glabrous except some papillations
just outward from the sinuses on the corolla lobes.
The surface is shallowly cupped.

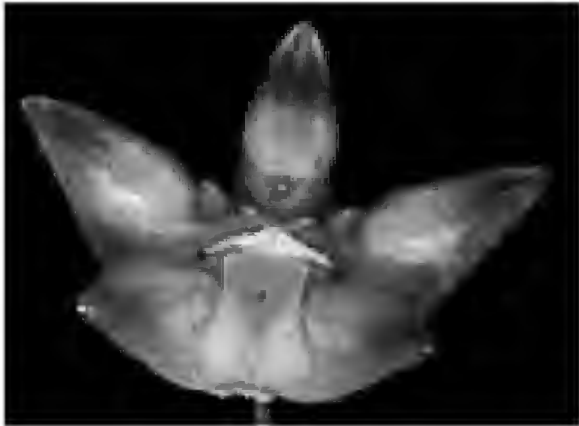


Corona: ventral surface enlarged ca. 17x, the
lobes are channeled with inner edges rolled under and
surfaces diagonally sulcate central column is 0.10 cm x
0.07 cm and 0.02 cm long, surface clean around it.
Anther wing apices are acute and protrude slightly from
the lobe sinuses.

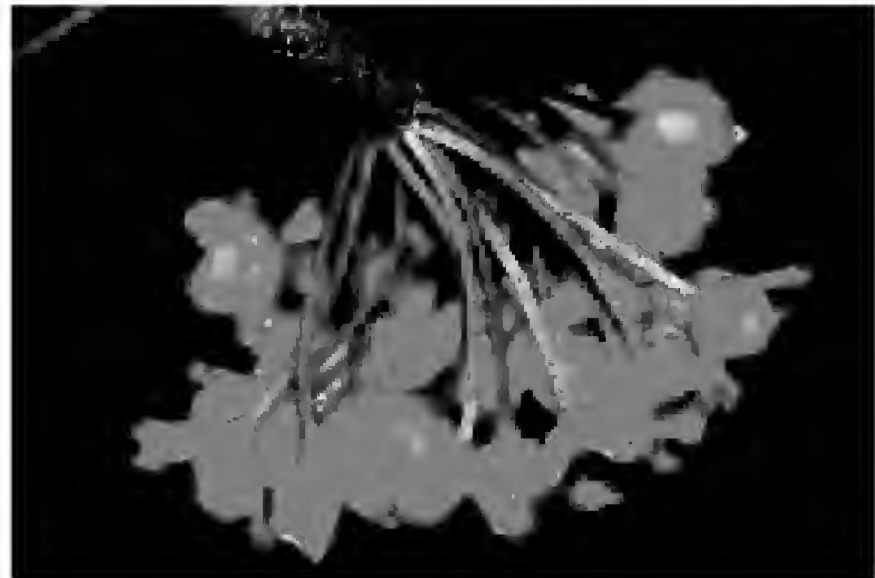
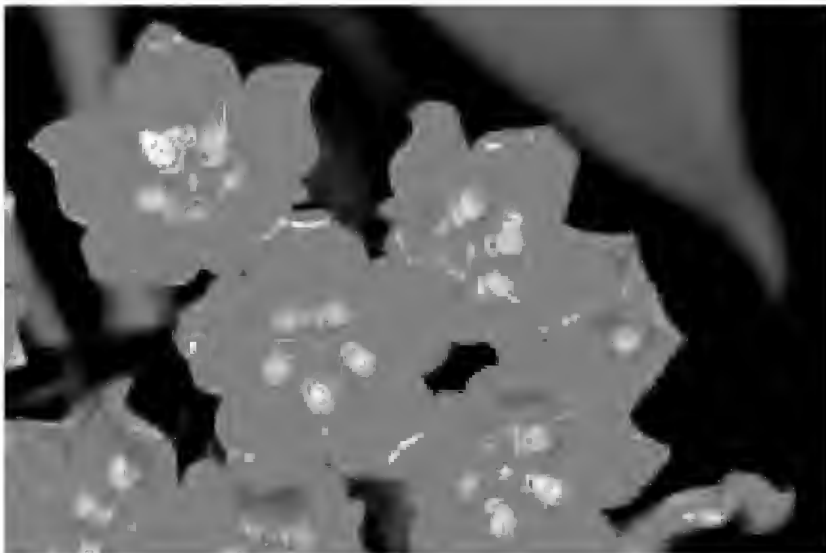


Corona: dorsal view, enlarged as above.

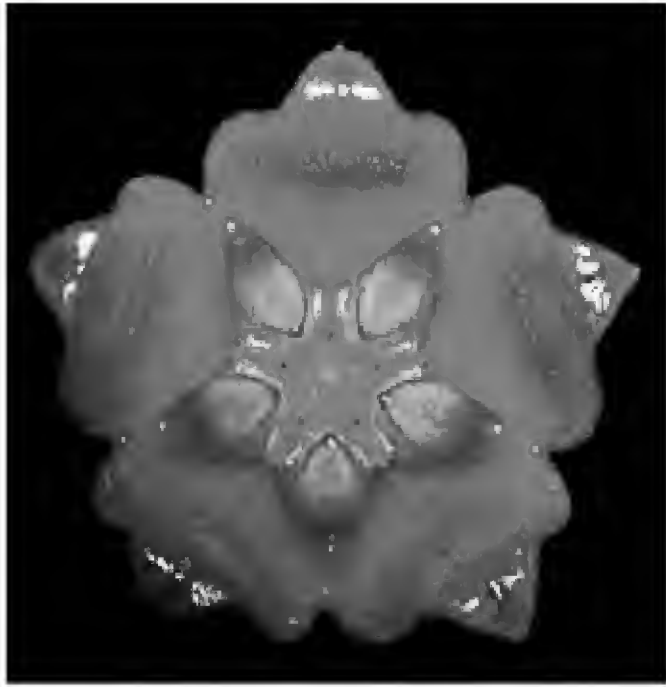
Apex – apex	0.21 cm
Apex – center	0.30 cm
Widest (dorsal)	0.11 cm
Ret. – ret./center	0.04 cm
Aw. - aw.	0.13 cm
Aw. – center	0.10 cm



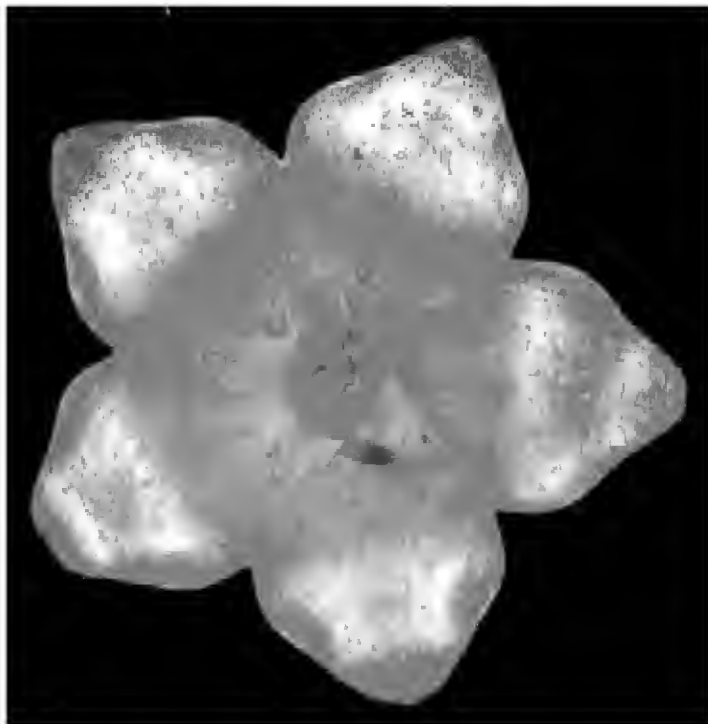
Corona: side view enlarged as above. The lobe inner apices are blunt and lower than the outer lobe apices which are sub-acute and the ends are not turned down. Dorsal is shallowly concave with rounded edges.



Flower cluster photos of about 24 flowers on curved pedicels.



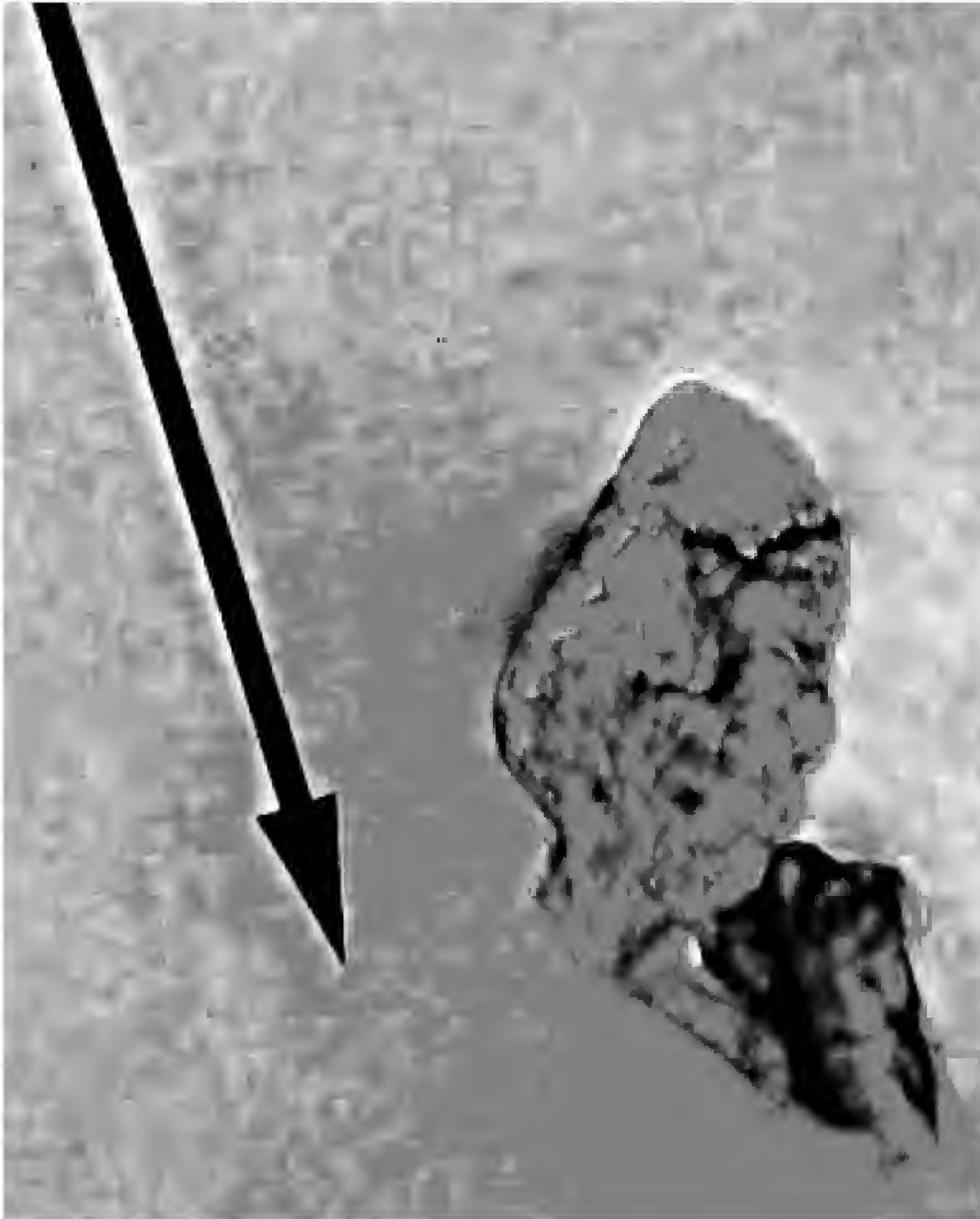
More photos of the flower.



Leaves: opposite, petiolate, glabrous, elliptic, dorsal convex, base narrowly obtuse, apex sub-acuminate, plinerved, anastomosis, some anthocyanin pigmentation present.

Leaf measurement: in centimeters

	length	width	petiole length
1.	18.2	4.1	1.5
2.	16.0	3.0	1.4
3.	15.2	2.9	1.4
4.	14.2	3.4	1.2
5.	8.4	2.3	0.9
Range	8.4-18.2	2.3-4.1	0.9 -1.5



Pollinarium enlarged ca. 180x.

Pollinium

length 0.38 mm
widest 0.20 mm

Retinaculum

length 0.16 mm
shoulder 0.15 mm
waist 0.09 mm
hip 0.10 mm
ext. 0.05 mm

Translator

length 0.15 mm
wide 0.04 mm

Caudicle

bulb diam. 0.05 mm

Translator/caudicle: ls/o

Pollinia inner end: R

Retinacula: S

Collected by George Mendoza et al at Mt. Lagyo, Quezon Province, Luzon Philippines. 400 m asl, aff.. Collection number GM # 218

Contributors:

John Michael M. Agcaoili: Graduate of Bachelor of Sci. in Biology, Polytechnic Univ. of the Philippines.

Dale Kloppenburg retired: Graduate UC Berkeley in Plant Genetics, Lt. USNR, Plant Breeder and Research Agronomist, now taxonomist of Genus Hoya.

George Mendoza, Landscape Artist, Nurseryman and Plant Explorer from Quezon City, Philippines, visit his web site www.forest-treasures.com.

A Reduced Copy of the Holotype Sheet



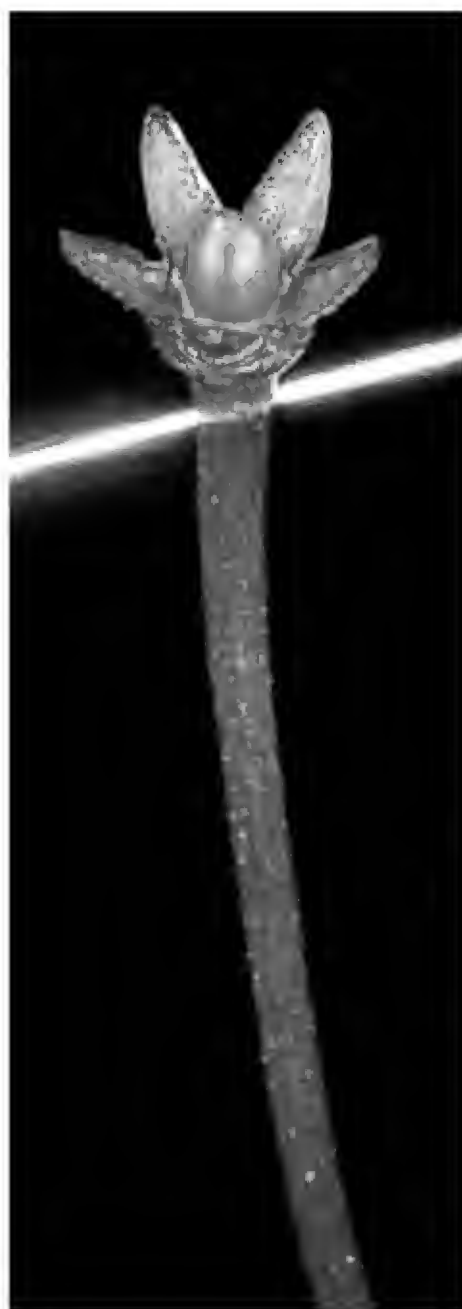
Hoya blashernaezii subsp. truncata Kloppenburg & Mendoza

ISSN 2329-7336

Hoya blashernaezii subsp. truncata Kloppenburg & Mendoza subsp. nova holotypus #255817 (PNH) hic designatus. Similis sp. sed, pedicila brevior 2.0 - 2.2 cm contrastre 2.0-2.5 cm et corolla discolor, et corolla diametro camplanatus 1.20 cm contrastre 1.60 cm grandiorum; coronae lobis brevior 0.26 cm contrastre, 0.32 cm ovaries forma usulais truncates (ita namine), differt.

The new subspecies is similar to the subsp. siariae but different the corolla is of a different color and the pedicels are shorter 2.0 - 2.2 cm versus 2.0-2.5 cm and the corolla diameter flattened is smaller 1.20 cm versus 1.60 cm among other differences, the flower color is similar to the *subspecies nagcarlanensis* (GM #68) but different in many measurements of flower parts. The most unusual part of this subspecies is the truncated ovaries (for which it is named). The corolla cup is shallow.

Detailed photos and measurements below:



Pedicel: with calyx attached enlarged ca. 16x. The pedicels are very fine filamentous, straight to slightly curved. 2.0 – 2.2 cm long, terete, glabrous, 0.05 cm in diameter.

Calyx: granulate glabrous outside, inside slick glabrous, sepals are sub-linear, with rounded apices, 0.18 cm long and 0.10 cm at the widest, small basal overlap. Ligules present.

Ovaries: short dome shaped with unusual apices, they are glabrous, 0.07 cm tall and base pair 0.06 cm wide.

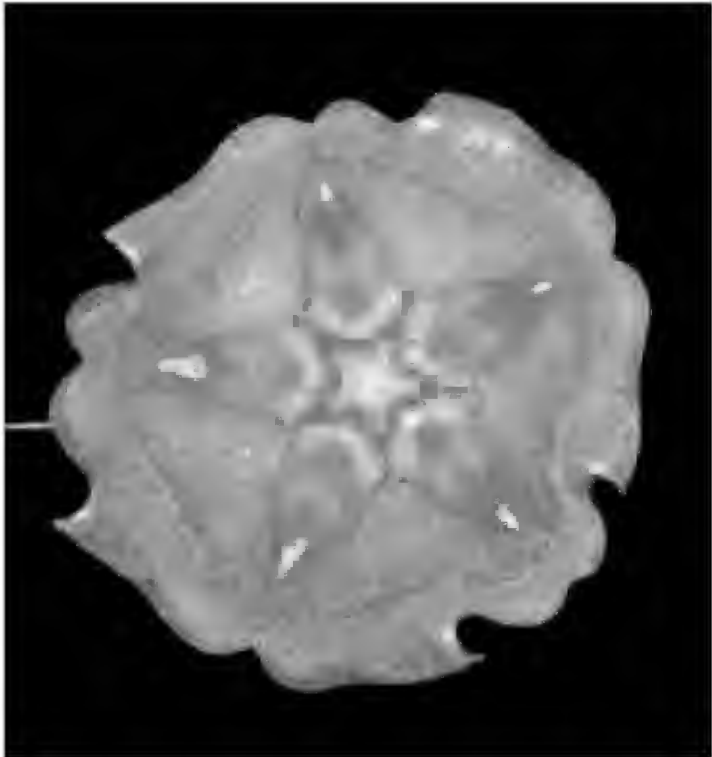
Photo below greatly enlarged, the ovaries are very short and stubby almost blocky in shape. The apical edges are rounded with a depression and a central small dome of a different color. (truncated).





Corolla: ventral surface enlarged ca. 83x. The surface is finely granulate. Photo from live flower.

Sinus – sinus	0.42 cm
Sinus – center	0.40 cm
Sinus- apex	0.35 cm
Apex – center	0.60 cm
Widest	0.42 cm



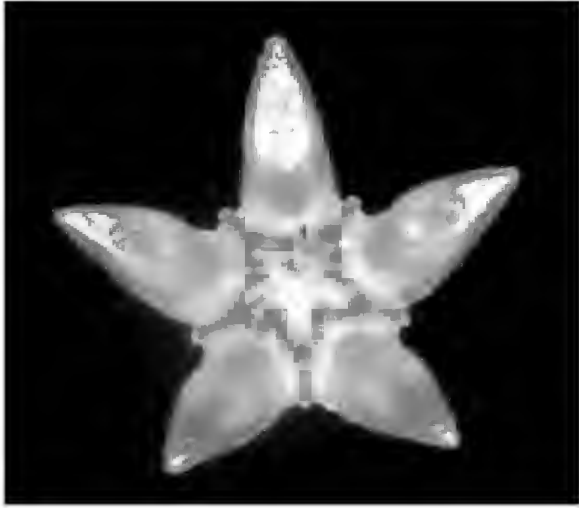
Corolla: dorsal surface with corona in place enlarged as above. The surface is finely puberulous just in from the sinuses decreasing inward becoming more granulate. A shallow cup.



Corona: ventral surface enlarged ca. 13x. The lobes are channeled to just inward from the sinus area, the edges do not appear to be sulcate. Center column is small and clear around it. The anther wing apices protrude 0.02 cm and have square ends.

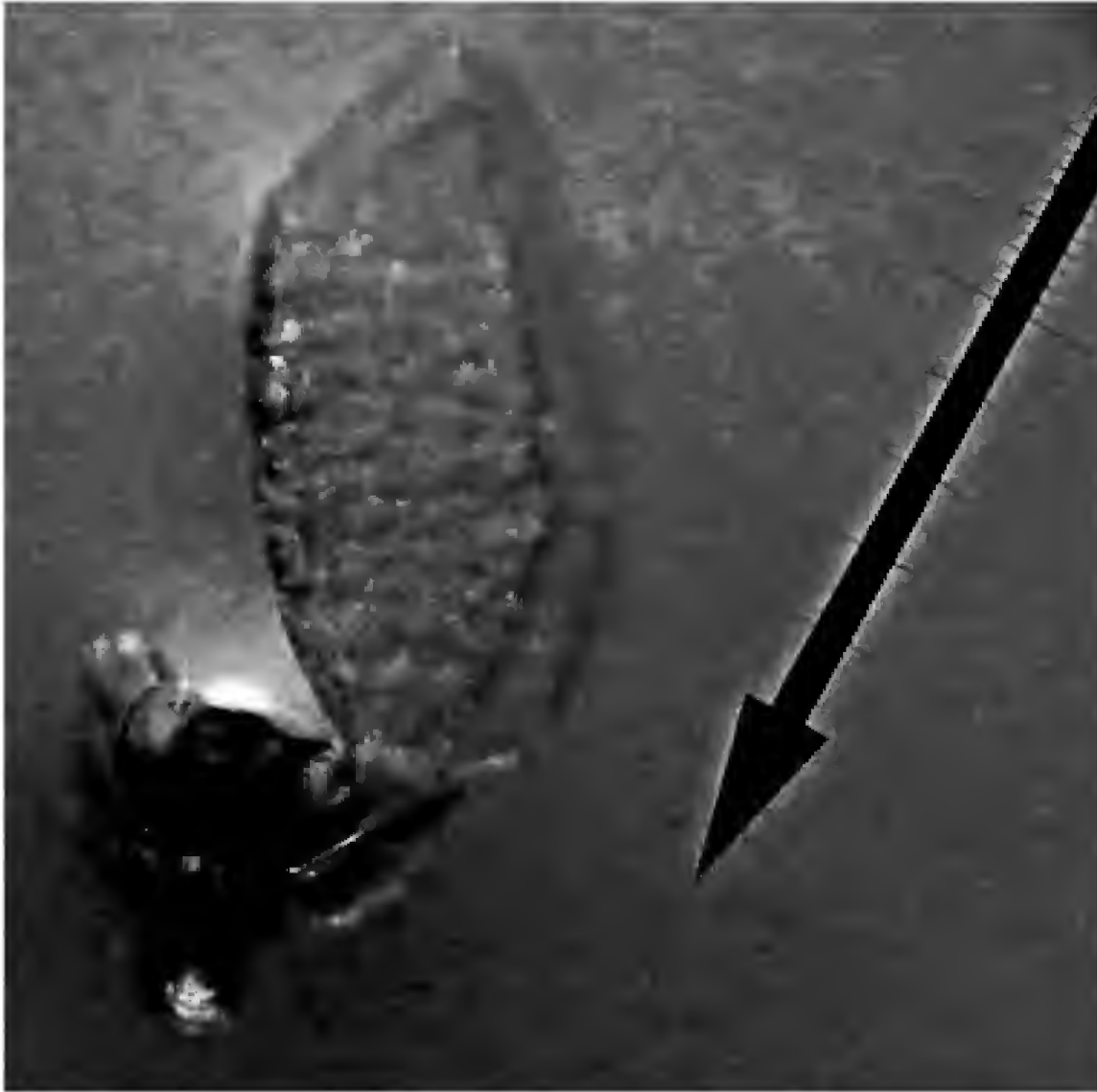


Corona side view, the outer lobe apices turn down slightly, the lobes are 0.08 cm at the thickest, the central column (below center) is thin walled.



Corona: dorsal surface enlarged as above the inner lobes are short dentate and far from the center, dorsal is sub-convex outer lobes are raised.

Apex – apex	0.26 cm
Apex – center	0.31 cm
Widest	0.07 cm
Ret. ret./center	0.06/0.05 cm
Aw. – aw./center	0.13/0/11 cm



Pollinarium enlarged ca. 170x.

Pollinium

length	0.40 mm
widest	0.20 mm

Retinaculum

length	0.13 mm
shoulder	0.14 mm
waist	0.08 mm
hip	0.10 mm
ext.	0.03 mm

Translator

length	0.13 mm
widest	0.04 mm

Caudicle

bulb diam.	0.05 mm
granulate G	

Translator/caudicle type: d/o

Pollinia apex type: T

Retinacula: HU

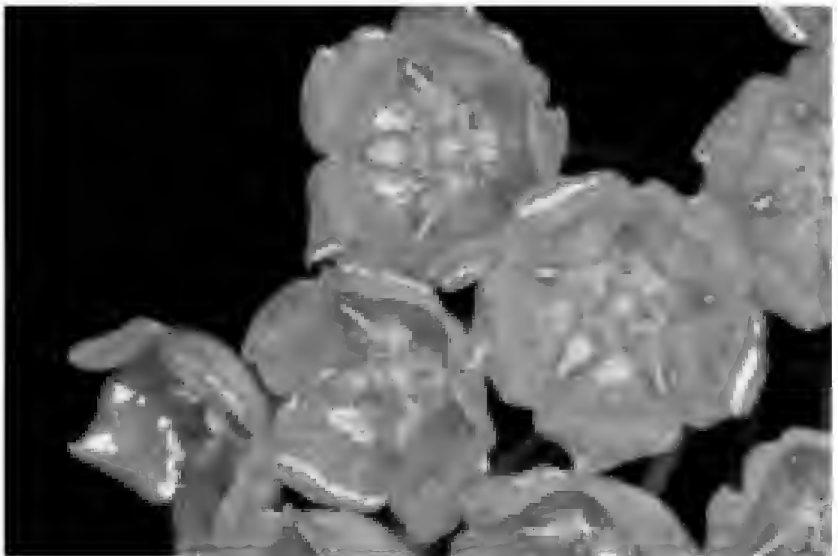
Collected by George Mendoza et al Mt. Taywanis, Quezon Province, Luzon, Philippines. Altitude 450 m. asl. Collection number GM #132.

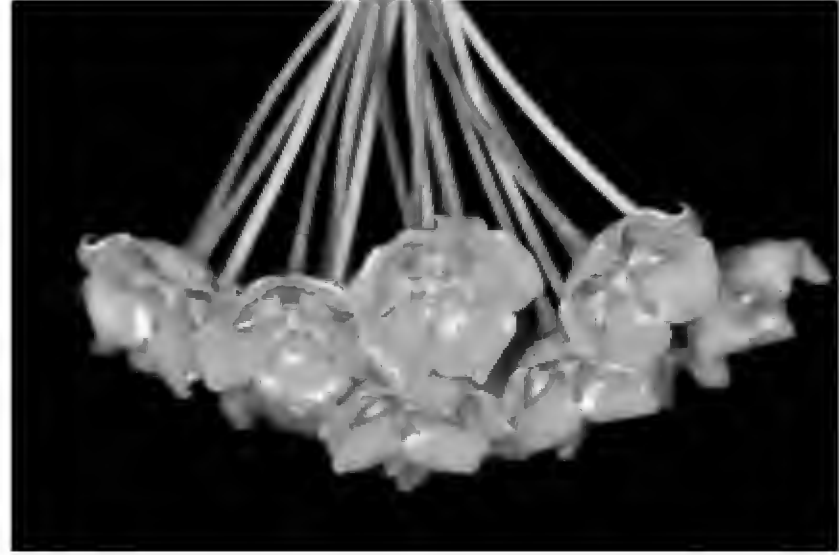
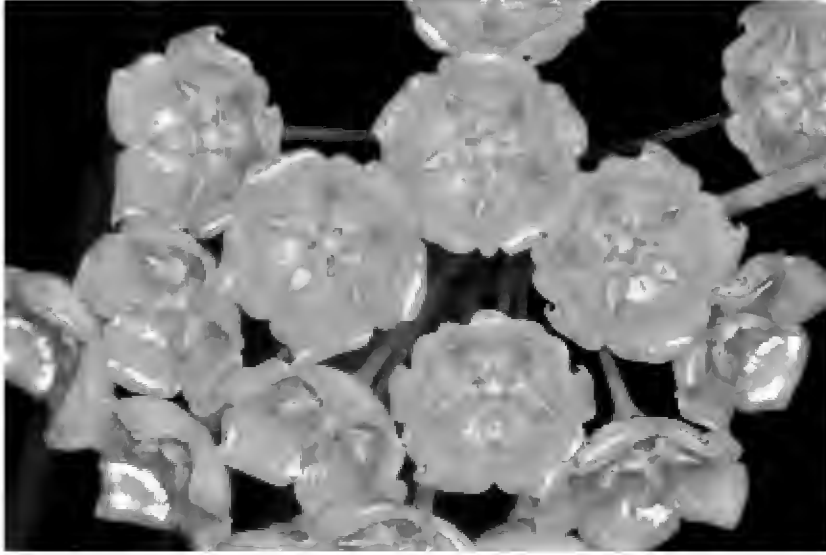
Leaves: opposite, petiolate, glabrous, elliptic, base sub-obtuse, apex narrowing acute to slightly rounded, plinerved anastomosing, lighter green than the leaf upper surface.

Leaf measurement: in centimeters

	length	width	petiole length
6.	15.5	3.2	1.9
7.	13.1	2.6	1.9
8.	11.1	2.4	2.0
9.	9.2	2.6	1.4
10.	7.5	2.1	1.1
Range	7.5-15.5	2.1-3.2	1.1 -2.0

Pictures of living plant and flowers by George Mendoza.





About 15 flowers per cluster.

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A Reduced Copy of the Holotype Sheet



Hoya cumingiana subsp. catanauanensis Kloppenburg & Mendoza

ISSN 2329-7336

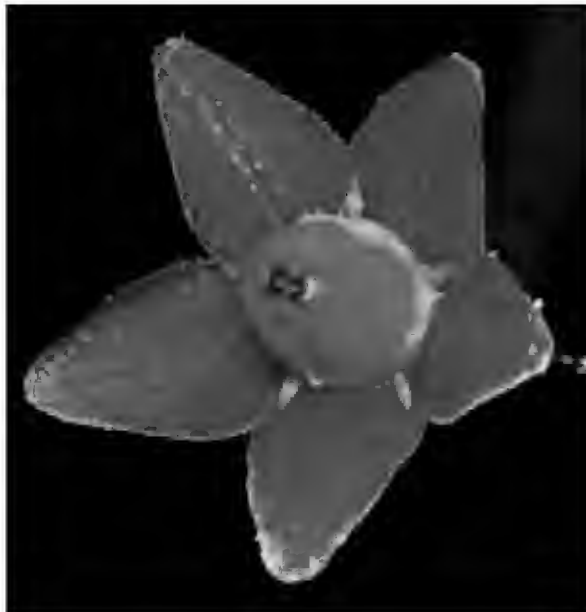
Hoya cumingiana subsp. catanauanensis Kloppenburg, Mendoza subsp. nova, holotypus 255872 (PNH) hic designatus. Similis *Hoya cumingiana* Decaisne 1844, et style apicum non captatulo, pedicila brevior 1.04 cm contrastre 2.0 cm et corolla diamanteo complanatus 1.28 cm contrastre 1.60 cm; coronae lobus brevior 0.32 cm contrastre 0.38 cm et pollinium brevior 0.50 mm contrastre 0.63 mm, differt.

The new subspecies is similar to the species but different, the style head here is not capitate, but mealy rounded, the pedicels are shorter 1.04 cm versus 2.0 cm and the corolla diameter flattened is smaller, 1.28 cm versus 1.60 cm also the pollinia are shorter 0.50 mm versus 0.63 mm among other differences.

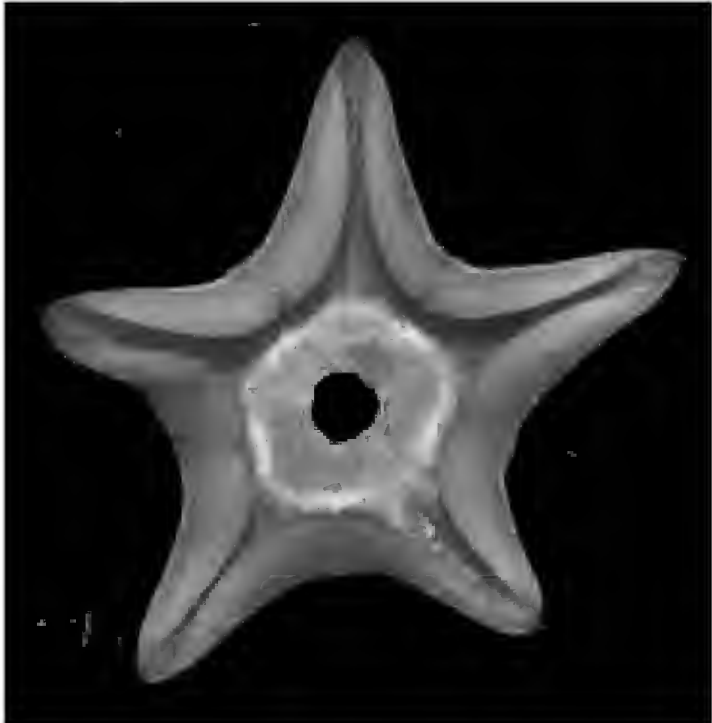


Pedicel: with calyx enlarged ca. 14x, they are 1.4 cm long, terete, curved, glabrous, 0.09 cm in diameter.

Calyx: sepals are elliptic granulate outside slick glabrous inside 0.21 cm long and 0.11 cm at the widest. Basal overlap $\frac{1}{4}$, ligules are present at the sinuses.



Ovaries: domed, glabrous 0.14 cm long and base pair 0.07 cm, red ringed apices touching in center (kissing).

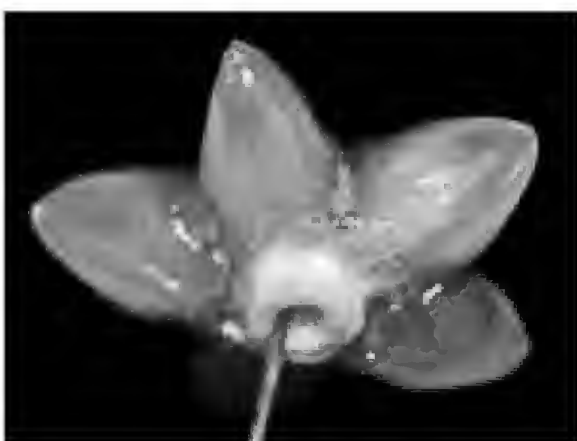


Corolla: ventral surface enlarged ca. 7.5x, glabrous, edges rolled under from the dorsal surface.

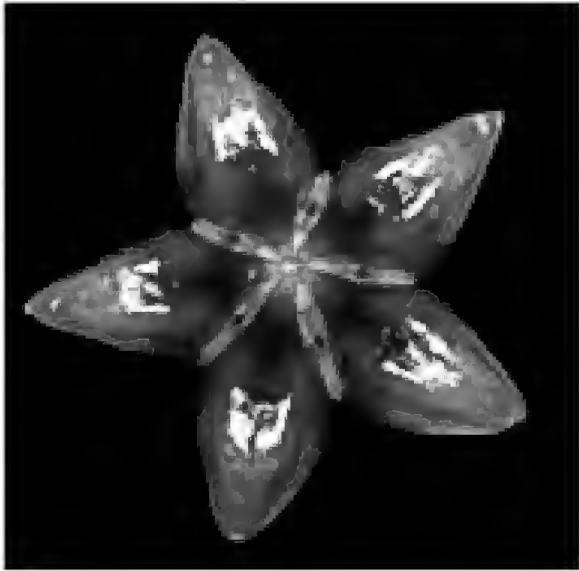
Sinus – sinus	0.38 cm
Sinus – center	0.35 cm
Sinus – apex	0.47 cm
Apex – center	0.64 cm
Widest	0.39 cm



Corolla: dorsal surface enlarged as above, surface is very finely granulate, ventral area sunken with a few hair cells around opening.



Corona: lower side view enlarged ca. 12.5x, surfaces are glabrous, lobes channeled with edges rolled under, surface very finely sulcate, central column 0.13 x 0.10 and 0.03 cm long, surrounded by small bulbous protrusions. Outer lobe apex sub-acute with a small tongue curved downward on some lobes.



Corona: dorsal surface enlarged as above, surfaces glabrous, center sharply raised from near the lobe center. Inner lobes are spatulate touching in the center. Outer lobe section nearly shelf-like.

Apex – apex	0.32 cm
Widest	0.10 cm
Outer lobe	0.20 cm long
Ret. – ret	0.06 cm
Ret. – center	0.09 cm
Aw. - aw.	0.14 cm
Aw. – center	0.18 cm



Pollinium

length	0.50 mm
widest	0.15 mm

Retinaculum

length	0.20 mm
shoulder	0.14 mm
waist	0.09 mm
hip	0.10 mm
ext.	0.05 mm

Translator

length	0.10 mm
widest	0.04 mm



Above enlarged 120x

Above enlarged 70x

Translator/caudicle type: ls/o most likely **Pollinia inner end type:** T (tapered)



Dorsal view of a flower



Side view of a flower note the coronal structure.



Flower ventral view with pedicel and calyx attached.

Collected by George Mendoza et al at Catanauan, Quezon Province, Luzon, Philippines at an altitude of 350 masl. Unknown species, collection number GM-226.

Leaves: opposite, petiolate, glabrous, elliptic, base obtuse, apex acuminate, plinerved anastomosing, anthocyanin pigmentation present, nerve protrusions visible on the ventral surface.

Leaf measurement: in centimeters

length	width	petiole length
11. 10.7	3.0	1.8
12. 10.2	2.8	1.7
13. 9.7	2.5	1.5
14. 8.6	2.3	1.5
15. 4.8	1.5	1.2
Range 4.8-10.7	1.5-3.0	1.2 -1.8

Contributors:

John Michael M. Agcaoili. Graduate of B. S. Biology, Polytechnic University of the Philippines, Sta. Mesa, Manila, Philippines.

Dale Kloppenburg, retired: Graduate of Plant Genetics, UC Berkeley; Lt., USNR; Plant Breeder and Research Agronomist; now taxonomist of Genus *Hoya*.

George Mendoza, Landscape Artist, Nurseryman, and Plant Explorer from Quezon City, Philippines (Web site: www.forest-treasures.com).

A reduced copy of the Holotype Sheet 255872 (PNH)



PHILIPPINES GM-226

APOCYNACEAE-ASCLEPIADOIDEAE

Hoya cumingiana subsp. *catanauanensis* M. Mendoza & Mendoza

cultivated plant; originally collected from Catanauan, Quezon Province, Luzon Island, Philippines at 250 m alt.

differs from the species in having shorter pedicels, smaller corolla diameter, and more rounded style head

Photo taken

Replicates none Collector George K. Mendoza

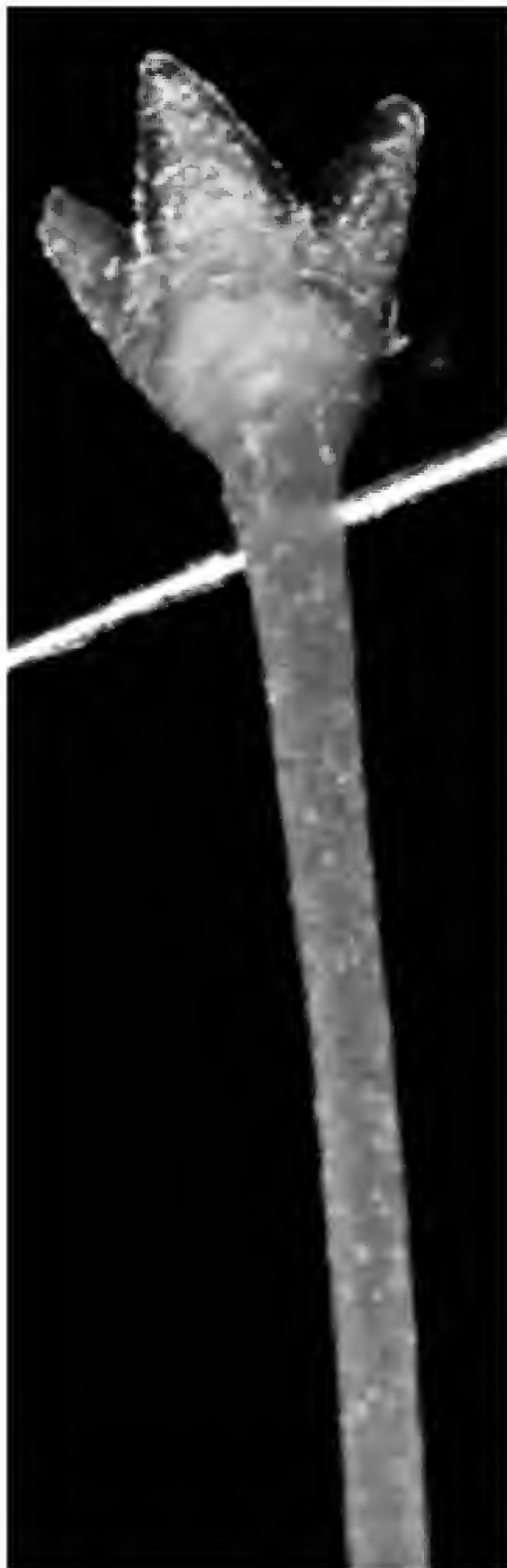
Prepared by John Michael M. Agca III

Hoya capotoanensis subsp. quezonensis Kloppenburg & Mendoza

ISSN 2329-7336

Hoya capotoanensis subsp. quezonensis Kloppenburg & Mendoza subsp. nova. Holotypus #255873 (PNH) hic designatus. Similis sp. sed corolla diamentro complanatus brevior 0.74 cm contrastre 0.90 cm, et coronae lobus breviora 0.17 cm contraster 0.25 cm, aliter similes.

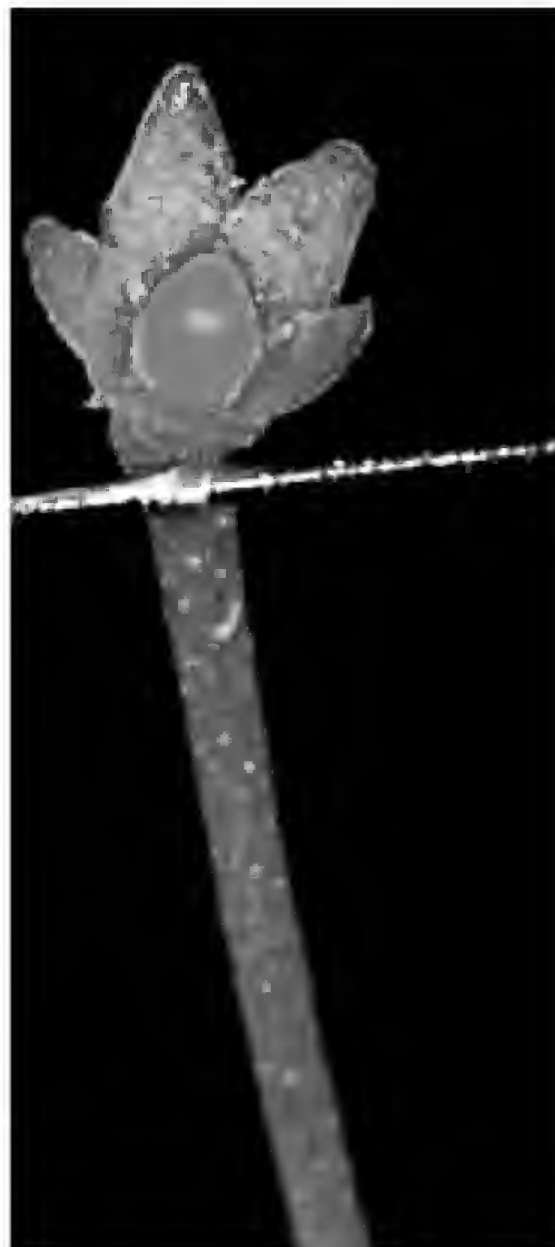
This subspecies is similar to the specie in pollinaria characteristics with the pollinia width more wide, the corolla flattened is less in diameter and the coronal lobes are shorter but similar in shape and structure. Neither of these plants are like Hoya camphorifolia as the corollas inside is not papillose and the outer coronal lobes are not obtuse.



Pedicel: enlarged ca. 25x, the pedicel is terete, glabrous 1.15 cm long and 0.05 cm in diameter.

Calyx: base globose, granulate surfaced. Sepals triangular, outside granulate inside slick glabrous, 0.11 cm long and 0.05 at the widest, basal overlap about $\frac{1}{4}$. Ligules present at the sinuses.

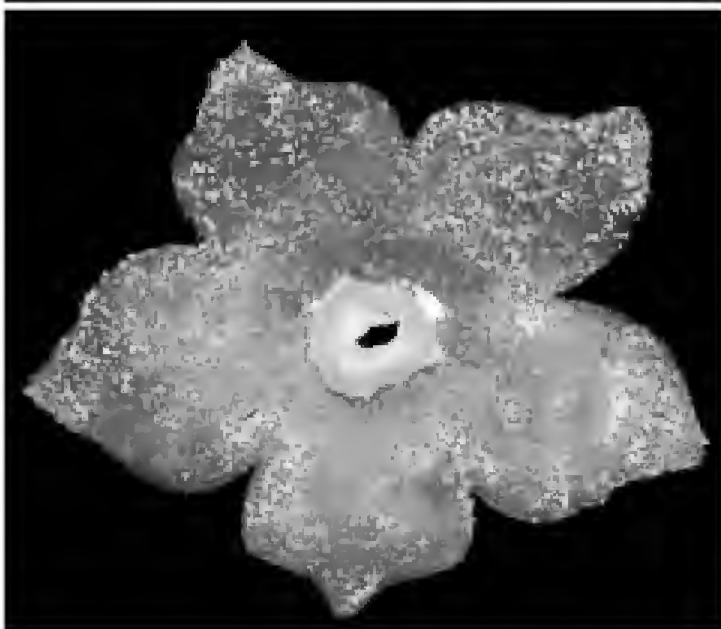
Ovaries: dome shaped, glabrous, 0.06 cm tall and base pair 0.06 cm wide.



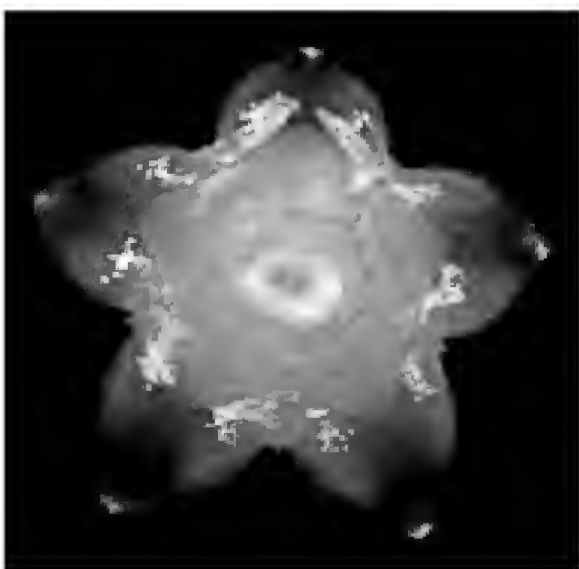


Corolla: ventral surface enlarged ca. 12.5x, it is finely granulate, revolute to slightly reflexed, lobes curved under.

Sinus – sinus	0.20 cm
Sinus – center	0.15 cm
Sinus – apex	0.28 cm
Apex – center	0.37 cm
Widest	0.22 cm



Corolla: dorsal surface enlarged as above, the surface is finely puberulous. Center area cupped and less puberulous.



Corona: ventral view enlarged ca. 10.5x. The lobes are channeled with sided sulcate, large open central area, central column oval thin walled 0.05 x 0.04 cm, clear around it, anther wings acute ended, projecting from the lobe sinuses only slightly.

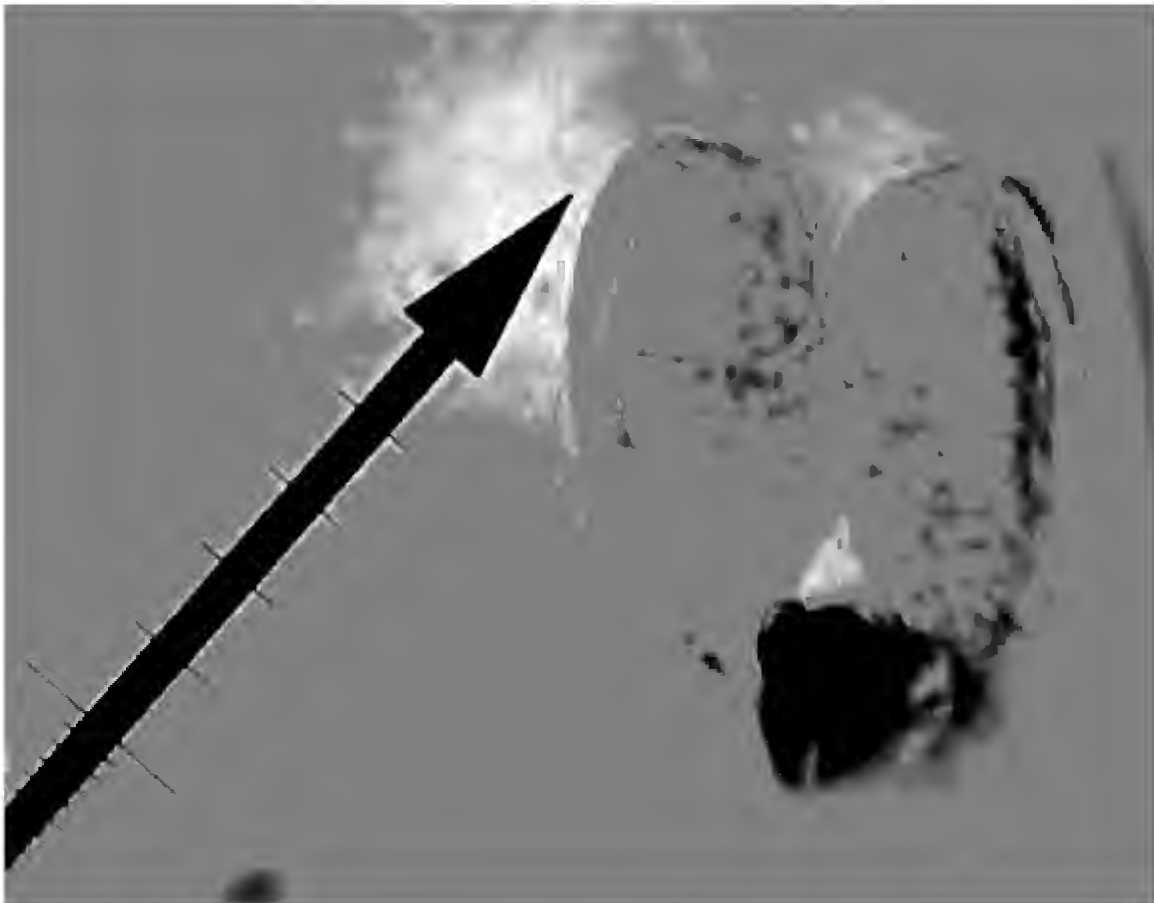


Corona: dorsal view enlarged as above, inner lobes do not reach the center are sub-terete, lobe dorsal is concave with a low forward umbo, outer apex is acute and raised above the center.

Apex – apex	0.17 cm
Apex – center	0.20 cm
Ret.- ret./ center	0.04 cm
Aw, - aw./center	0.09 cm



Corona: side view enlarged as above, outer lobe is raised slightly with the apex turned down a little, the column is prominent 0.02 cm long.



Pollinarium enlarged ca. 180x.

Pollinium		Translator/caudicle type: ls/o	
length	0.22 mm		
widest	0.12 mm		
Retinaculum		Pollinia inner end type: R	
length	0.07 mm		
shoulder	0.08 mm		
waist	0.06 mm		
hip	0.07 mm		
ext.	0.03 mm		
Translator		Retinacula: HU “hands up”	
length	0.04 mm		
widest	0.02 mm		
Caudicle			
bulb diam.	0.03 mm		



Collected by George Mendoza et al at Mt. Tingkoyan, Quezon Province, Luzon, Philippines. Altitude 350m asl, Hoya camphorifolia complex. GM #207

Leaves: opposite, petiolate, glabrous, elliptic. plinerved with nerves anastomosing and lighter colored than the leaf surface, base obtuse, apex acute, edged slightly turned under.

Leaf measurement: in centimeters

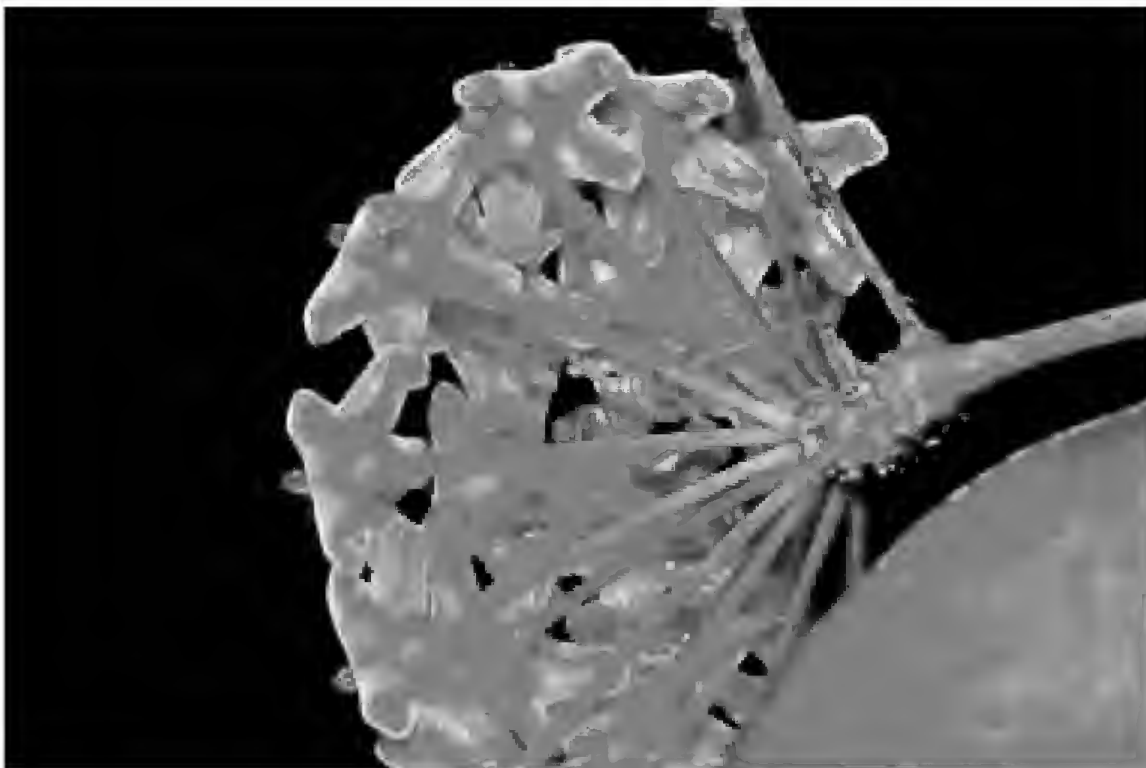
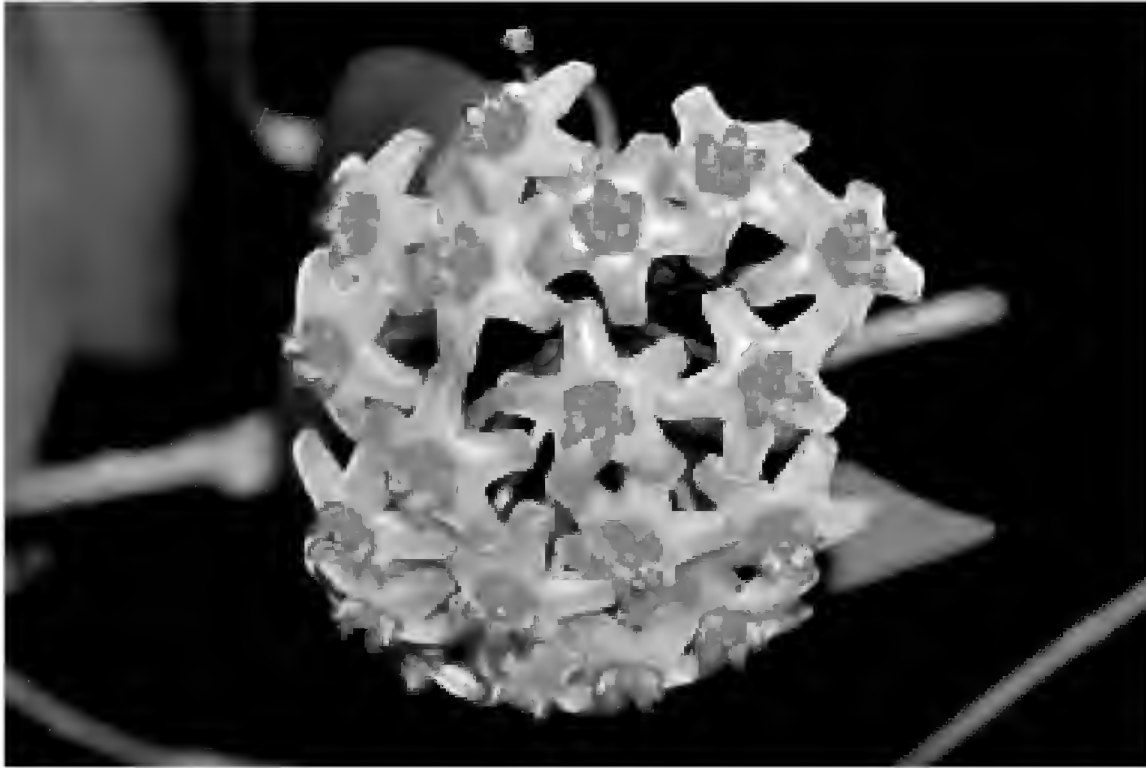
length	width	petiole length
16. 12.5	4.5	2.9
17. 11.2	4.0	2.4
18. 10.7	4.0	2.5
19. 9.5	3.5	2.5
20. 8.2	3.1	1.5
Range 8.2-12.5	3.1-4.5	1.5 -2.9



More photos by George Mendoza.

The flower clusters are semi-globose with even length pedicels, with up to about 22 flowers.





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A Reduced Copy of the Holotype Sheet



PHILIPPINES GM-207

APOCYNACEAE-ASCLEPIADOIDEAE

Hoya capotomensis subsp. *quizonensis* Klappert & Mendonça

cultivated plant, originally collected from Mt. Tinglayan, Agaña Province, Luzon Island, Philippines at 250 msl

differs from the species in smaller corolla diameter and slender corolla lobes

Photo taken

Replicates: none Collector: George K. Mendonça

Prepared by: John Michael M. Agcaon

Hoya mindorensis subsp. lagyoensis Kloppenburg & Mendoza

ISSN 2329-7336

Hoya mindorensis subsp. lagyoensis Kloppenburg & Mendoza subsp. nova, holotypus #255874 (PNH) hic designatus. Similis sp. sed pedicilli brevior 1.0 cm contrastre 1.5 cm et sepala plus rotund non ovatis; corolla diametro complanatus grandior 1.20 cm contrastre 0.90 cm et coronae lobus longior 0.33 cm contrastre 0.23 cm, differt.

Here again we have a species that is highly variable, many color variations that also have many differences in the flower parts. This subspecies differs from Dr. Schlechter's type in that the sepals here are more rotund (round). The pedicels here are shorter 1.0 cm vs. 1.5 cm, also here the corolla flattened is 1.20 cm in diameter vs. 0.90 cm and the coronal lobes are longer 0.33 cm vs. 0.23 cm and their channeling does not have the edges turned out to form a V among other differences.

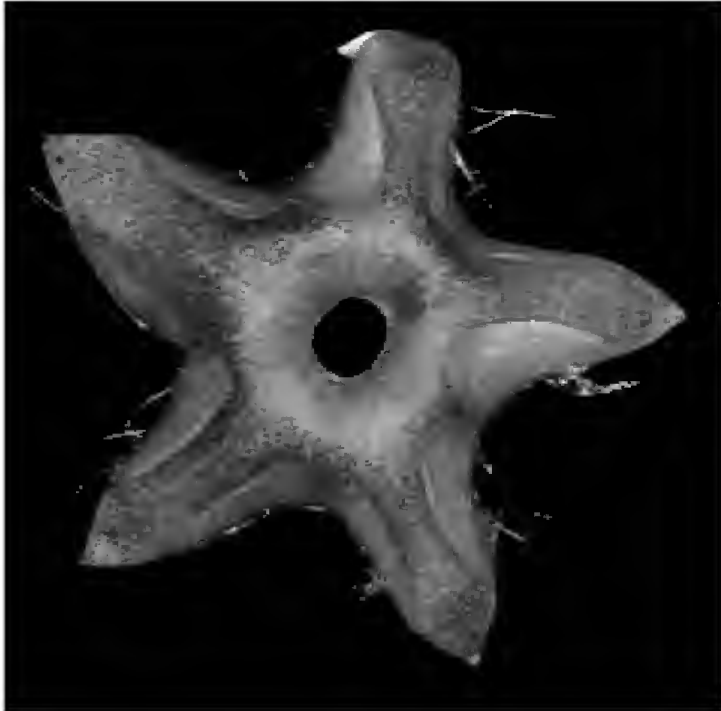
Following is more detailed data and photographs:



Pedicel: section with the calyx attached enlarged ca. 14x. They are strict, terete, glabrous 1.0 cm long, tapering larger from the pedicel to below the calyx base 0.08 – 0.10 cm in diameter

Calyx: sepals are sub-ovate with rounded apices, ligules are present at the sinuses, edges are ciliate, outside granulate inside slick glabrous.

Ovaries: are dome shaped to nearly columnar 0.12 cm tall and base pair 0.01 cm wide, surfaces are glabrous apex with circular endings.



Corolla: ventral side enlarged ca. 7x, the surface is glabrous, lobe sides and apices turn under so the sinuses are conduplicate.

Sinus – sinus	0.40 cm
Sinus – center	0.32 cm
Sinus – apex	0.33 cm
Apex – center	0.60 cm
Widest	0.40 cm



Corolla: (flower) here enlarged 10x, the dorsal surface is rotate-reflexed, glabrous under the corona, with scattered hirsute (stellate) cells on the lobe surfaces.

Coronal scale is 0.18cm at the deepest. In (inner apex to base below).



Corona: ventral surface here enlarged ca. 10x, the lobes are channeled surfaces slick glabrous. Central column short ca. 0.02 cm tall, surrounding with sparse hirsute cells.



Corona dorsal surface enlarged as above the lobes are keeled from apex to apex and inner lobes dentate and reach the center. Surfaces are glabrous. Anthers are creped. There are lenticular depressions on the dorsal lobe apical areas.

Apex – apex	0.33 cm
Ret. – ret./center	0.15 cm/0.14 cm



Corona: side view, the outer coronal lobes slope downward

Collected by George Mendoza et al at Mt. Lagyo, Quezon Province, Luzon, Philippines at an altitude of 450m asl, collection number GM #198.

Leaves: opposite, petiolate, glabrous, elliptic, base obtuse, apex acute, obscure pinnate nervation, they cup downward (dorsal convex).

Leaf measurement: in centimeters

length	width	petiole length
21. 12.9	6.1	2.8
22. 10.5	4.8	2.5
23. 9.5	4.7	2.1
24. 8.7	5.0	2.1
25. 6.0	3.7	1.5

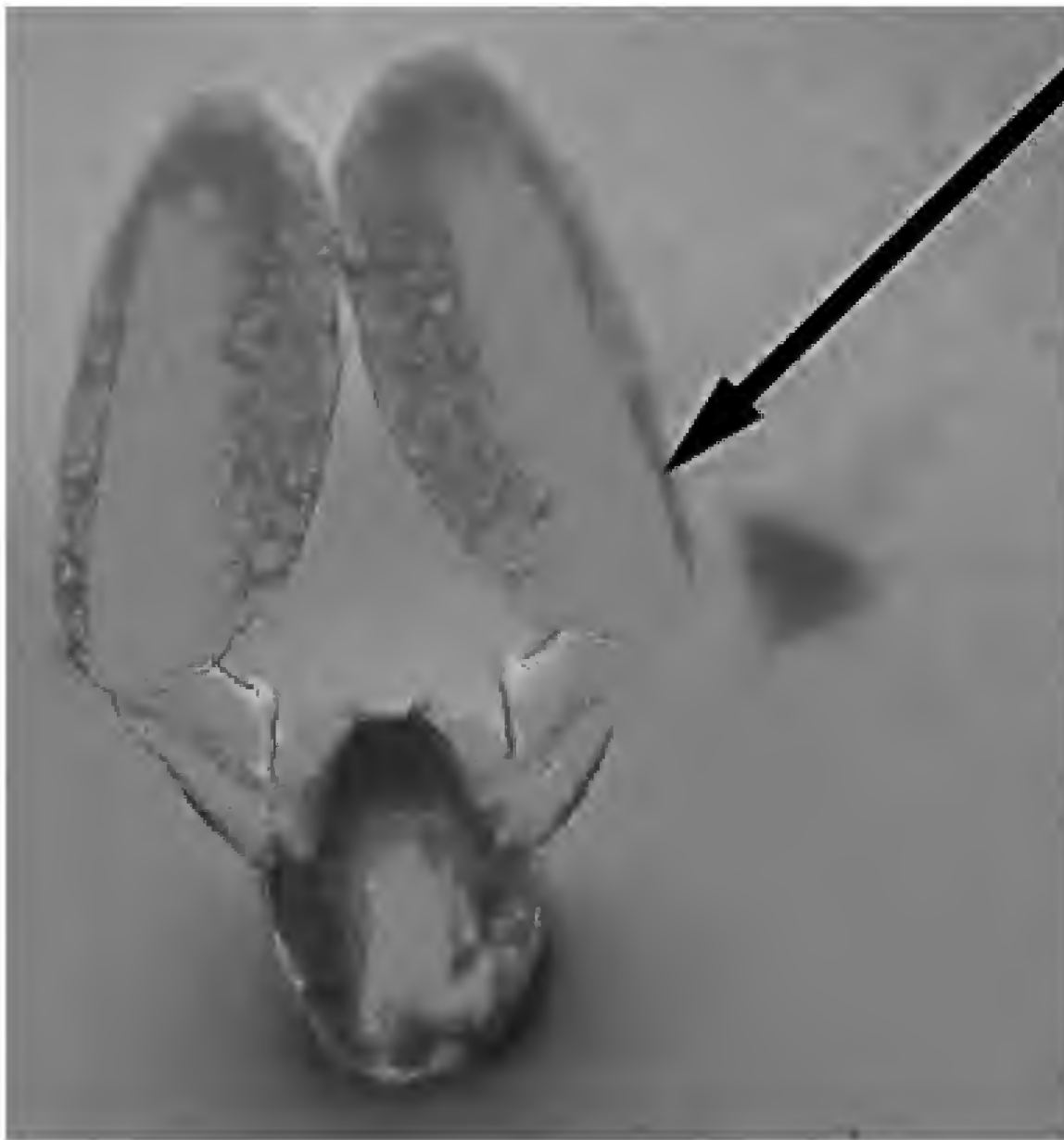
Range 6.0-12.9	3.7-6.1	1.5 -2.8
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Contributors:

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Dale Kloppenburg retired: Lt. USNR, Plant Breeder and Research Agronomist, now taxonomist of Genus Hoya.

George Mendoza, Landscape Artist, Nurseryman and Plant Explorer from Quezon City, Philippines, visit his web site www.forest-treasures.com.



Pollinarium enlarged ca. 110x.

Pollinium

length 0.50 mm
widest 0.23 mm

Retinaculum

length 0.30 mm
widest 0.25 mm

Translator

length 0.18 mm
widest 0.05 mm

Caudicle

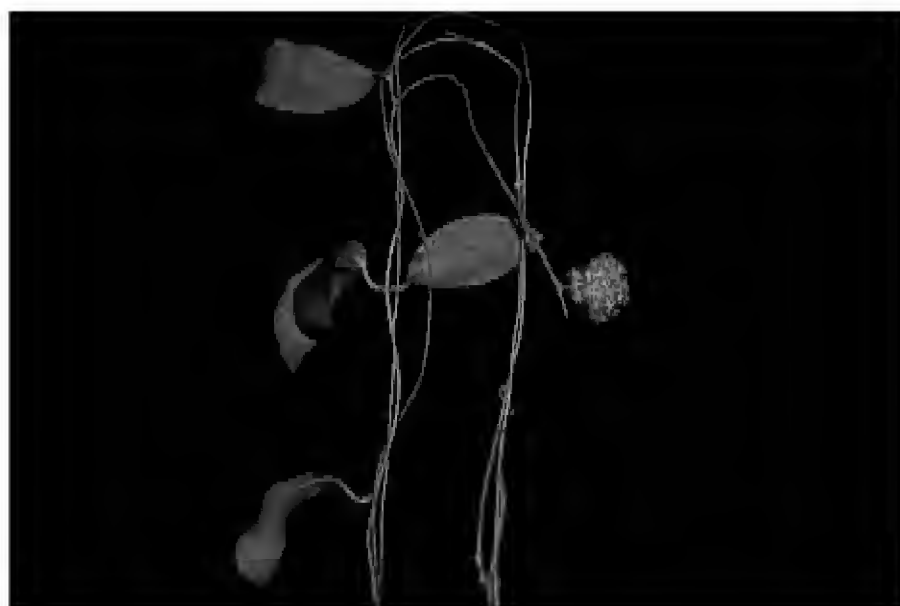
oval 0.15 x 0.07 mm

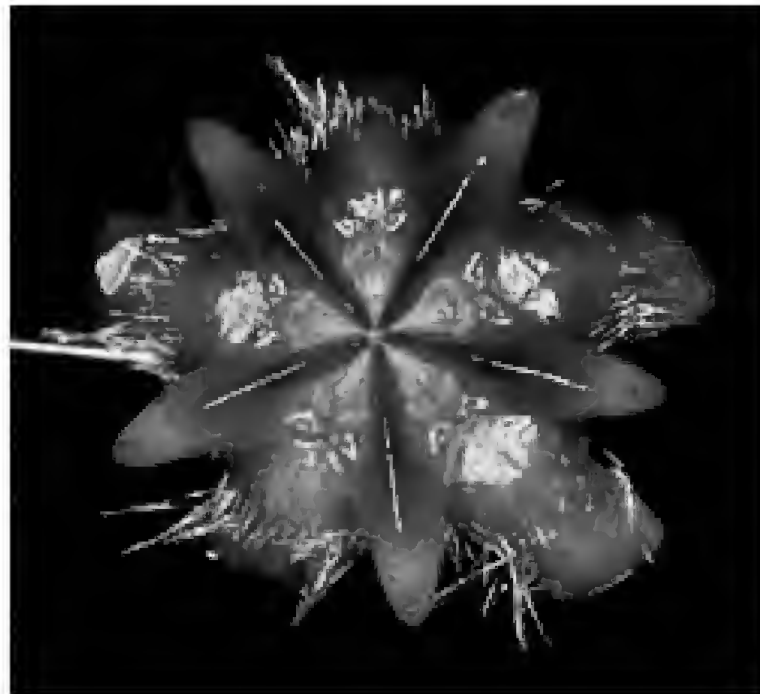
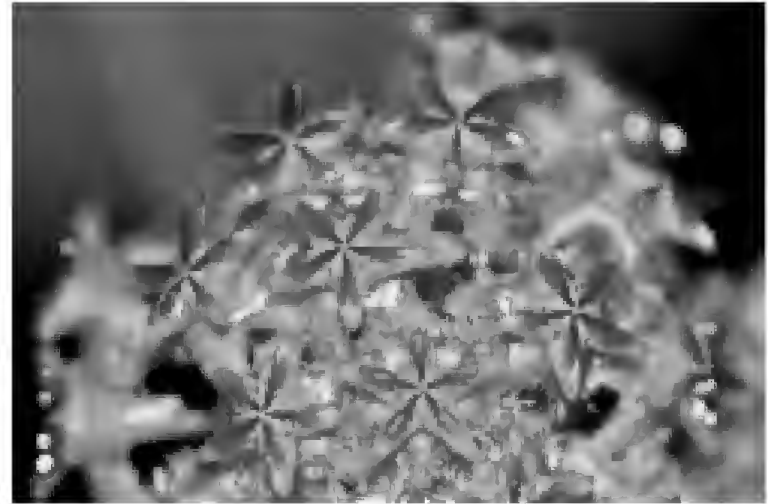
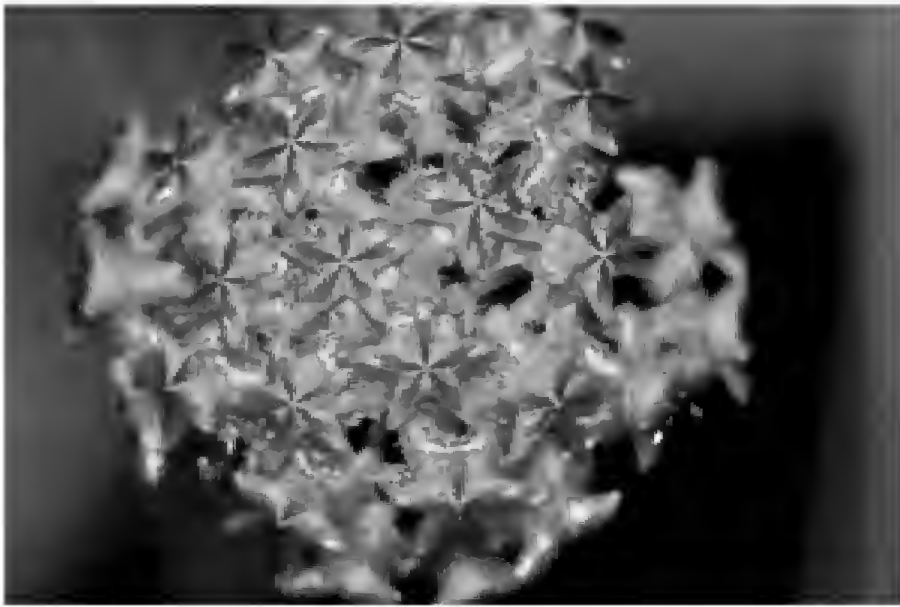
Translator/caudicle type:
ls/r.

Pollinia apex type: R

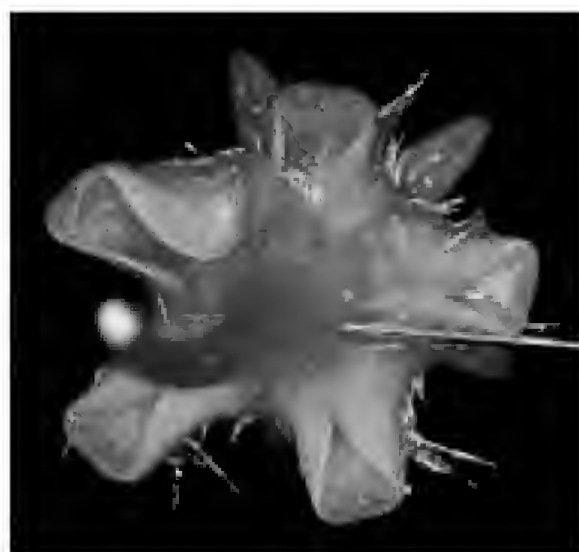
Note: the horns on the retinaculum head.

Additional pictures, all photos of living plants taken by George Mendoza except the pollinarium photo.

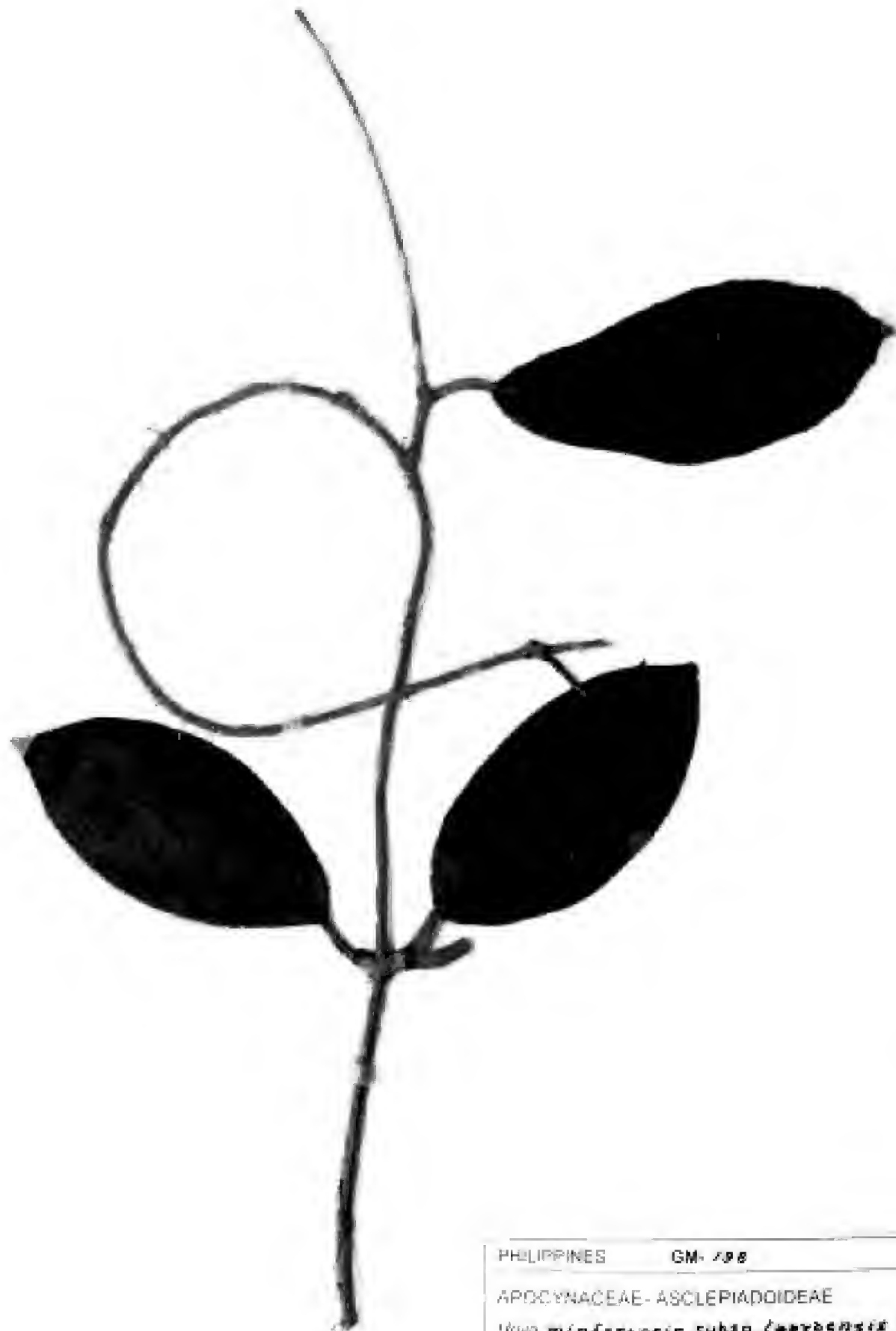




About 27 flowers per cluster ?



A Reduced Copy of the Holotype Sheet



PHILIPPINES GM-798
 APOCYNACEAE-ASCLEPIADOIDEAE
Hoya mindanensis subsp. *lappoensis* Mendoza & McQuinn
 cultivated plant; originally collected from Mt. Lappo, Quezon Province, Luzon Island, Philippines at 200 m alt.
 Similar to the species except for shorter pedicels, rounder sepals, wider corolla, larger corolla lobes, and the channeling does not have the lobes turned out to form a V.

Photo taken
 Replicates none Collector George K. Mendoza
 Prepared by John Michael M. Agcahill